

WHAT IS CLAIMED IS:

1. A method of modulating expression of a THAP responsive gene, said method comprising modulating the interaction of a THAP-family polypeptide or a biologically active fragment thereof with a nucleic acid, thereby enhancing or
5 repressing expression of said THAP responsive gene.

2. The method of Claim 1, wherein said THAP-family polypeptide is THAP1.

3. The method of Claim 1, wherein said nucleic acid is a THAP responsive promoter.

10 4. The method of Claim 3, wherein said THAP responsive promoter comprises a THAP responsive element.

5. The method of Claim 4, wherein said THAP responsive element is a DR-5 element.

15 6. The method of Claim 4, wherein said THAP responsive element is an ER-11 element.

7. The method of Claim 4, wherein said THAP responsive element is THRE.

8. The method of Claim 3, wherein said THAP responsive promoter does not comprise a THAP responsive element.

20 9. The method of Claim 8, wherein said THAP responsive promoter is modulated by a product of a gene that is under the control of a promoter which comprises a THAP responsive element.

10. The method of Claim 1, wherein said THAP responsive gene is selected from the group consisting of Survivin, PTTG1/Securin, PTTG2/Securin, PTTG3/Securin, CKS1, MAD2L1, USP16/Ubp-M, HMMR/RHAMM, KIAA0008/HURP, CDCA7/JPO1 and THAP1.

11. The method of Claim 1, wherein said THAP responsive gene encodes a polypeptide involved in the G2 or M phase of the cell cycle.

12. The method of Claim 1, wherein said THAP responsive gene encodes a polypeptide involved in the S phase of the cell cycle.

13. The method of Claim 12, wherein said THAP responsive gene encodes a polypeptide involved in DNA replication.

14. The method of Claim 12, wherein said THAP responsive gene encodes a polypeptide involved in DNA repair.

15. The method of Claim 1, wherein said THAP responsive gene encodes a polypeptide involved in RNA splicing.

5 16. The method of Claim 1, wherein said THAP responsive gene encodes a polypeptide involved in apoptosis.

17. The method of Claim 1, wherein said THAP responsive gene encodes a polypeptide involved in angiogenesis.

10 18. The method of Claim 1, wherein said THAP responsive gene encodes a polypeptide involved in the proliferation of cancer cells.

19. The method of Claim 1, wherein said THAP responsive gene encodes a polypeptide involved in inflammatory disease.

15 20. A method of modulating the expression of a gene responsive to a THAP/chemokine complex, said method comprising modulating the interaction of a chemokine with a THAP-family polypeptide or a biologically active fragment thereof, thereby enhancing or repressing expression of said gene.

21. The method of Claim 20, wherein said THAP-family polypeptide is THAP1.

20 22. The method of Claim 20, wherein said chemokine is selected from the group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

23. The method of Claim 20, wherein said chemokine is SLC.

24. The method of Claim 20, wherein said chemokine is CXCL9.

25 25. The method of Claim 20, wherein the interaction between said chemokine and said THAP-family polypeptide is modulated by providing a THAP-type chemokine-binding agent.

26. The method of Claim 25, wherein said THAP-type chemokine-binding agent comprises a polypeptide selected from the group consisting of a THAP1 polypeptide, an chemokine-binding domain of a THAP1 polypeptide, a THAP1 polypeptide oligomer, an oligomer comprising a THAP1 chemokine-binding domain, a THAP1 polypeptide-immunoglobulin fusion, a THAP1 chemokine-binding domain-immunoglobulin fusion and polypeptide homologs of any one of the aforementioned polypeptides.

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27. The method of Claim 26, wherein said chemokine-binding domain is an SLC-binding domain.
28. The method of Claim 26, wherein said chemokine-binding domain is a CXCL9-binding domain.
- 5 29. The method of Claim 20, wherein said gene encodes a polypeptide involved in the G2 or M phase of the cell cycle.
30. The method of Claim 20, wherein said gene encodes a polypeptide involved in the S phase of the cell cycle.
31. The method of Claim 30, wherein said gene encodes a polypeptide
10 involved in DNA replication.
32. The method of Claim 30, wherein said gene encodes a polypeptide involved in DNA repair.
33. The method of Claim 20, wherein said gene encodes a polypeptide involved in RNA splicing.
- 15 34. The method of Claim 20, wherein said gene encodes a polypeptide involved in apoptosis.
35. The method of Claim 20, wherein said gene encodes a polypeptide involved in angiogenesis.
36. The method of Claim 20, wherein said gene encodes a polypeptide
20 involved in the proliferation of cancer cells.
37. The method of Claim 20, wherein said gene encodes a polypeptide involved in inflammatory disease.
38. A method of modulating the expression of a gene responsive to a THAP/chemokine complex, said method comprising modulating the interaction of a
25 THAP/chemokine complex with a nucleic acid, thereby enhancing or repressing expression of said gene.
39. The method of Claim 38, wherein said THAP-family polypeptide is THAP1.
40. The method of Claim 38, wherein said chemokine is selected from the
30 group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.
41. The method of Claim 38, wherein said chemokine is SLC.
42. The method of Claim 38, wherein said chemokine is CXCL9.

43. The method of Claim 38, wherein said gene encodes a polypeptide involved in the G2 or M phase of the cell cycle.

44. The method of Claim 38, wherein said gene encodes a polypeptide involved in the S phase of the cell cycle.

5 45. The method of Claim 44, wherein said gene encodes a polypeptide involved in DNA replication.

46. The method of Claim 44, wherein said gene encodes a polypeptide involved in DNA repair.

10 47. The method of Claim 38, wherein said gene encodes a polypeptide involved in RNA splicing.

48. The method of Claim 38, wherein said gene encodes a polypeptide involved in apoptosis.

49. The method of Claim 38, wherein said gene encodes a polypeptide involved in angiogenesis.

15 50. The method of Claim 38, wherein said gene encodes a polypeptide involved in the proliferation of cancer cells.

51. The method of Claim 38, wherein said gene encodes a polypeptide involved in inflammatory disease.

20 52. The method of Claim 38, wherein said nucleic acid is a THAP responsive promoter.

53. The method of Claim 52, wherein said THAP responsive promoter comprises a THAP responsive element.

54. The method of Claim 53, wherein said THAP responsive element is a DR-5 element.

25 55. The method of Claim 53, wherein said THAP responsive element is an ER-11 element.

56. The method of Claim 53, wherein said THAP responsive element is THRE.

30 57. The method of Claim 52, wherein said THAP responsive promoter does not comprise a THAP responsive element.

58. The method of Claim 57, wherein said THAP responsive promoter is modulated by a product of a gene that is under the control of a promoter which comprises a THAP responsive element.

5 59. A pharmaceutical composition comprising a THAP responsive element in a pharmaceutically acceptable carrier.

60. The pharmaceutical composition of Claim 59, wherein said THAP responsive element is a DR-5 element.

61. The pharmaceutical composition of Claim 59, wherein said THAP responsive element is an ER-11 element.

10 62. The pharmaceutical composition of Claim 59, wherein said THAP responsive element is an THRE.

63. A transcription factor decoy consisting essentially of a THAP responsive element.

15 64. The transcription factor decoy of Claim 63, wherein said THAP responsive element is a DR-5 element.

65. The transcription factor decoy of Claim 63, wherein said THAP responsive element is a ER-11 element.

66. The transcription factor decoy of Claim 63, wherein said THAP responsive element is a THRE element.

20 67. A cell comprising a transcription factor decoy of claim 63.

68. A method of modulating the interaction between a nucleic acid and a THAP-family polypeptide or a biologically active fragment thereof, said method comprising providing a transcription factor decoy which comprises a THAP responsive element, thereby modulating the interaction between said nucleic acid and said THAP-family polypeptide or a biologically active fragment thereof.

25 69. The method of Claim 68, wherein said THAP-family polypeptide is THAP1.

70. The method of Claim 68, wherein said THAP responsive element is a DR-5 element.

30 71. The method of Claim 68, wherein said THAP responsive element is an ER-11 element.

72. The method of Claim 68, wherein said THAP responsive element is THRE.

73. A method of modulating the interaction between a nucleic acid and a THAP/chemokine complex, said method comprising providing a transcription factor
5 decoy which comprises a THAP responsive element, thereby modulating the interaction between said nucleic acid and said THAP/chemokine complex.

74. The method of Claim 73, wherein said THAP-family polypeptide is THAP1.

75. The method of Claim 73, wherein said chemokine is selected from the
10 group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

76. The method of Claim 73, wherein said chemokine is SLC.

77. The method of Claim 73, wherein said chemokine is CXCL9.

78. The method of Claim 73, wherein said THAP responsive element is a
DR-5 element.

79. The method of Claim 73, wherein said THAP responsive element is an
15 ER-11 element.

80. The method of Claim 73, wherein said THAP responsive element is THRE.

81. A vector packaging cell line comprising a cell comprising a viral vector
20 which comprises a promoter operably linked to a nucleic acid encoding a THAP-family polypeptide or a biologically active fragment thereof.

82. The cell line of Claim 81, wherein said cell further comprises an introduced nucleic acid construct comprising a nucleic acid encoding a chemokine operably linked to a promoter.

83. The cell line of Claim 82, wherein said chemokine-encoding construct is
25 included on the same vector as said nucleic acid encoding said THAP-family polypeptide or biologically active fragment thereof.

84. The cell line of Claim 82, wherein said nucleic acid encoding said chemokine encodes a chemokine selected from the group consisting of SLC, CCL19,
30 CCL5, CXCL11, CXCL10 and CXCL9.

85. The cell line of Claim 82, wherein said nucleic acid encoding said chemokine encodes SLC.

86. The cell line of Claim 82, wherein said nucleic acid encoding said chemokine encodes CXCL9.

87. The cell line of Claim 81, wherein said THAP-family polypeptide is THAP1.

5 88. The cell line of Claim 81, wherein said cell is a mammalian cell.

89. The cell line of Claim 88, wherein said cell is a human cell.

90. The cell line of Claim 81, wherein said viral vector is an adenoviral vector.

91. The cell line of Claim 81, wherein said viral vector is a retroviral vector.

10 92. A cell which is genetically engineered to express a THAP-family polypeptide or a biologically active fragment thereof.

93. The cell line of Claim 92, wherein said THAP-family polypeptide is THAP1.

94. The cell line of Claim 92, wherein said cell is a mammalian cell.

15 95. The cell line of Claim 92, wherein said cell is a human cell.

96. The cell line of Claim 92, wherein said THAP family polypeptide is encoded by a gene that is introduced into the cell on an adenoviral vector.

97. The cell line of Claim 92, wherein said THAP family polypeptide is encoded by a gene that is introduced into the cell on a retroviral vector.

20 98. A method of constructing a cell which expresses a recombinant THAP-family polypeptide, said method comprising introducing into a cell a vector comprising a nucleic acid encoding a THAP-family polypeptide or a biologically active fragment thereof operably linked to a promoter.

25 99. The method of Claim 98, further comprising introducing into a cell a nucleic acid construct comprising a nucleic acid encoding a chemokine operably linked to a promoter.

100. The method of Claim 99, wherein said chemokine-encoding construct is included on the same vector as said nucleic acid encoding said THAP-family polypeptide or biologically active fragment thereof.

30 101. The method of Claim 99, wherein said nucleic acid encoding said chemokine encodes a chemokine selected from the group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

102. The method of Claim 99, wherein said nucleic acid encoding said chemokine encodes SLC.

103. The method of Claim 99, wherein said nucleic acid encoding said chemokine encodes CXCL9.

5 104. The method of Claim 98, wherein said THAP-family polypeptide is THAP1.

105. The method of Claim 98, wherein said cell is a mammalian cell.

106. The method of Claim 105, wherein said cell is a human cell.

107. The method of Claim 98, wherein said vector is a viral vector.

10 108. The method of Claim 107, wherein said vector is an adenoviral vector.

109. The method of Claim 107, wherein said vector is a retroviral vector.

110. The method of Claim 98, wherein said vector is introduced into said cell by transfection.

111. A method of ameliorating symptoms associated with a condition
15 mediated by a THAP/chemokine complex, said method comprising:

 introducing into a cell a nucleic acid construct comprising a nucleic acid encoding a chemokine operably linked to a promoter and a nucleic acid construct comprising a nucleic acid encoding a THAP-family polypeptide or a biologically active fragment thereof operably linked to a promoter; and

20 expressing said nucleic acid encoding said chemokine and said nucleic acid encoding said THAP-family polypeptide or biologically active fragment thereof.

112. The method of Claim 111, wherein said nucleic acid constructs are present on a single vector.

25 113. The method of Claim 111, wherein said nucleic acid constructs are present on different vectors.

114. The method of Claim 111, wherein said cell is a mammalian cell.

115. The method of Claim 114, wherein said cell is a human cell.

30 116. The method of Claim 111, wherein said nucleic acid encoding said chemokine encodes a chemokine selected from the group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

117. The method of Claim 111, wherein said nucleic acid encoding said chemokine encodes SLC.

118. The method of Claim 111, wherein said nucleic acid encoding said chemokine encodes CXCL9.

5 119. The method of Claim 111, wherein said THAP-family polypeptide is THAP1.

120. A method of identifying a test compound that modulates transcription at a THAP responsive element, said method comprising:

10 comparing the level of transcription from a THAP responsive promoter in the presence and absence of a test compound wherein a determination that the level of transcription is increased or decreased in the presence of said test compound relative to the level of transcription in the absence of said test compound indicates that said test compound is a candidate modulator of transcription.

15 121. The method of Claim 120, wherein the level of transcription from said THAP responsive promoter in the presence and absence of the test compound is determined by performing an in vitro transcription reaction using a construct comprising said THAP responsive promoter and a THAP-family polypeptide or a biologically active fragment thereof, wherein said THAP-family polypeptide comprises
20 an amino acid sequence having at least 30% amino acid identity to an amino acid sequence of SEQ ID NO: 1.

122. The method of Claim 120, wherein the level of transcription from said THAP responsive promoter in the presence and the absence of the test compound is determined by measuring the level of transcription from a THAP responsive promoter
25 in a cell expressing a THAP-family polypeptide or a biologically active fragment thereof, wherein said THAP-family polypeptide comprises an amino acid sequence having at least 30% amino acid identity to an amino acid sequence of SEQ ID NO: 1.

123. The method of Claim 120, wherein said THAP-family polypeptide or biologically active fragment thereof is selected from the group consisting of SEQ ID
30 NOs: 1-114 and biologically active fragments thereof.

124. The method of Claim 120, wherein said THAP responsive promoter comprises a THAP responsive element having a nucleotide sequence selected from the

group consisting of SEQ ID NOs: 140-159, SEQ ID NO: 306, and homologs thereof having at least 60% nucleotide identity.

125. The method of Claim 121 or Claim 122, wherein the level of transcription in the presence or absence of said test compound is measured in the presence of a chemokine.

126. The method of Claim 125, wherein said chemokine is selected from the group consisting of CCL family chemokines and CXCL family chemokines.

127. The method of Claim 126, wherein said CCL family chemokine is selected from the group consisting of SLC, CCL19 and CCL5.

128. The method of Claim 126, wherein said CXCL family chemokine is selected from the group consisting of CXCL11, CXCL10 and CXCL9.

129. The method of Claim 125, wherein the level of transcription in the presence or absence of said test compound is measured in a cell which expresses a receptor for said chemokine.

130. The method of Claim 129, wherein said chemokine receptor is selected from the group consisting of CCR1, CCR3, CCR5, CCR7, CCR11 and CXCR3.

131. The method of Claim 130, wherein said chemokine is selected from the group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

132. The method of Claim 129, wherein said THAP-family polypeptide comprises THAP1 or a biologically active fragment thereof and said cell expresses the CCR7 receptor.

133. The method of Claim 132, wherein said chemokine is SLC.

134. The method of Claim 129, wherein said THAP-family polypeptide comprises THAP1 or a biologically active fragment thereof and said cell expresses the CXCR3 receptor.

135. The method of Claim 134, wherein said chemokine is CXCL9.

136. The method of Claim 122, wherein said THAP responsive promoter is in a gene endogenous to said cell.

137. The method of Claim 122, wherein said THAP responsive promoter has been introduced into said cell.

138. The method of Claim 122, wherein said THAP responsive promoter does not comprise a THAP responsive element.

139. The method of Claim 138, wherein said THAP responsive promoter is modulated by a product of a gene that is under the control of a promoter which comprises a THAP responsive element.

140. A method for reducing the symptoms associated with a condition selected from the group consisting of excessive or insufficient angiogenesis, inflammation, metastasis of a cancerous tissue, excessive or insufficient apoptosis, cardiovascular disease and neurodegenerative diseases comprising modulating the interaction between a THAP-family polypeptide and a chemokine in an individual suffering from said condition.

141. The method of Claim 140, wherein said THAP-family polypeptide is selected from a group consisting of polypeptides having an amino acid sequence of SEQ ID NOs: 1-114.

142. The method of Claim 140, wherein said chemokine is selected from the group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

143. The method of Claim 140, wherein said chemokine is SLC and the condition is inflammation.

144. The method of Claim 140, wherein said chemokine is SLC and the condition is excessive or insufficient angiogenesis.

145. The method of Claim 140, wherein said chemokine is CXCL9 and the condition is inflammation.

146. The method of Claim 140, wherein said chemokine is CXCL9 and the condition is excessive or insufficient angiogenesis.

147. A method for reducing the symptoms associated with a condition resulting from the activity of a chemokine in an individual comprising modulating the interaction between said chemokine and a THAP-family polypeptide in said individual.

148. The method of Claim 147, wherein said chemokine is selected from the group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

149. The method of Claim 147, wherein said chemokine is SLC.

150. The method of Claim 147, wherein said chemokine is CXCL9.

151. The method of Claim 147, wherein said THAP-family polypeptide is THAP-1.

152. The method of Claim 147, wherein the condition is inflammation.

153. The method of Claim 147, wherein the condition is excessive or insufficient angiogenesis.

154. The method of Claim 147, wherein the interaction between said chemokine and said THAP-family polypeptide is modulated by administering to an individual, a therapeutically effective amount of a THAP-type chemokine-binding agent.

155. The method of Claim 154, wherein said THAP-type chemokine-binding agent comprises a therapeutically effective amount of a polypeptide selected from the group consisting of a THAP1 polypeptide, an chemokine-binding domain of a THAP1 polypeptide, a THAP1 polypeptide oligomer, an oligomer comprising a THAP1 chemokine-binding domain, a THAP1 polypeptide-immunoglobulin fusion, a THAP1 chemokine-binding domain-immunoglobulin fusion and polypeptide homologs having at least 30% amino acid identity to any one of the aforementioned polypeptides.

156. The method of Claim 155, wherein said chemokine-binding domain is an SLC-binding domain.

157. The method of Claim 155, wherein said chemokine-binding domain is a CXCL9-binding domain.

158. A method of reducing the symptoms associated with a condition resulting from the activity of a THAP-family polypeptide in an individual comprising modulating the extent of transcriptional repression or activation of at least one THAP-family responsive promoter in said individual.

159. The method of Claim 158, wherein said THAP-family polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 1-114.

160. The method of Claim 158, wherein said THAP-family polypeptide comprises an amino acid sequence of SEQ ID NO: 3.

161. The method of Claim 158, wherein said THAP responsive promoter comprises a THAP responsive element.

162. The method of Claim 158, wherein said THAP responsive promoter does not comprise a THAP responsive element.

163. A method of reducing the symptoms associated with a condition resulting from the activity of a THAP-family polypeptide in an individual, said method comprising:

5 diagnosing said individual with a condition resulting from the activity of
a THAP-family polypeptide; and
 administering a compound which modulates the interaction between said
THAP-family polypeptide and a chemokine to said individual.

164. The method of Claim 163, wherein said THAP-family polypeptide is
selected from a group consisting of polypeptides having an amino acid sequence of
10 SEQ ID NOs: 1-114.

165. The method of Claim 163, wherein said THAP-family polypeptide is
THAP1.

166. The method of Claim 163, wherein said chemokine is selected from the
group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

15 167. The method of Claim 163, wherein said chemokine is SLC.

168. The method of Claim 163, wherein said chemokine is CXCL9.

169. A method of reducing the symptoms associated with a condition
resulting from the activity of a THAP-family polypeptide in an individual comprising:

20 diagnosing said individual with a condition resulting from the activity of
THAP-family polypeptide; and
 administering a chemokine or an analog thereof to said individual.

170. The method of Claim 169, wherein said THAP-family polypeptide is
selected from a group consisting of polypeptides having an amino acid sequence of
SEQ ID NOs: 1-114.

25 171. The method of Claim 169, wherein said THAP-family polypeptide is
THAP1.

172. The method of Claim 169, wherein said chemokine is selected from the
group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

173. The method of Claim 169, wherein said chemokine is SLC.

30 174. The method of Claim 169, wherein said chemokine is CXCL9.

175. A method of reducing the symptoms associated with transcriptional repression or activation mediated by a THAP-family polypeptide in an individual comprising administering a chemokine or an analog thereof to said individual.

176. The method of Claim 175, wherein said THAP-family polypeptide is
5 selected from a group consisting of polypeptides having an amino acid sequence of SEQ ID NOs: 1-114.

177. The method of Claim 175, wherein said THAP-family polypeptide is THAP1.

178. The method of Claim 175, wherein said chemokine is selected from the
10 group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

179. The method of Claim 175, wherein said chemokine is SLC.

180. The method of Claim 175, wherein said chemokine is CXCL9.

181. A method of reducing the symptoms associated with the activity of a chemokine in an individual comprising modulating the extent to which said chemokine
15 is transported to the nucleus of a cell in said individual.

182. The method of Claim 181, wherein said chemokine is selected from the group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

183. The method of Claim 181, wherein said cell expresses a chemokine receptor selected from the group consisting of CCR1, CCR3, CCR5, CCR7, CCR11 and
20 CXCR3.

184. The method of Claim 183, wherein said chemokine is SLC and said chemokine receptor is CCR7.

185. The method of Claim 183, wherein said chemokine is CXCL9 and said chemokine receptor is CXCR3.

186. The method of Claim 181, wherein the extent of transport of said chemokine into a nucleus of a cell is modulated by contacting said chemokine with a
25 THAP-type chemokine-binding agent.

187. The method of Claim 186, wherein said THAP-type chemokine-binding agent selected from the group consisting of a THAP1 polypeptide, a chemokine-binding
30 domain of a THAP1 polypeptide, a THAP1 polypeptide oligomer, an oligomer comprising a THAP1 chemokine-binding domain, a THAP1 polypeptide-immunoglobulin fusion, a THAP1 chemokine-binding domain-immunoglobulin fusion

and polypeptide homologs having at least 30% amino acid identity to any one of the aforementioned polypeptides.

188. The method of Claim 187, wherein said chemokine-binding domain is an SLC-binding domain.

5 189. The method of Claim 187, wherein said chemokine-binding domain is a CXCL9-binding domain.

190. A method for identifying a compound which modulates the transport of a chemokine into the nucleus comprising comparing the extent of said chemokine transport into the nucleus of cells in the presence and absence of a test compound.

10 191. The method of Claim 190, wherein said chemokine is selected from the group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

192. The method of Claim 190, wherein said cell expresses a chemokine receptor selected from the group consisting of CCR1, CCR3, CCR5, CCR7, CCR11 and CXCR3.

15 193. The method of Claim 192, wherein said chemokine is SLC and said chemokine receptor is CCR7.

194. The method of Claim 192, wherein said chemokine is CXCL9 and said chemokine receptor is CXCR3.

20 195. The method of Claim 190, wherein the extent of transport of said chemokine into a nucleus of a cell is modulated by contacting said chemokine with a THAP-type chemokine-binding agent.

25 196. The method of Claim 195, wherein said THAP-type chemokine-binding agent is selected from the group consisting of a THAP1 polypeptide, a chemokine-binding domain of a THAP1 polypeptide, a THAP1 polypeptide oligomer, an oligomer comprising a THAP1 chemokine-binding domain, a THAP1 polypeptide-immunoglobulin fusion, a THAP1 chemokine-binding domain-immunoglobulin fusion and polypeptide homologs having at least 30% amino acid identity to any one of the aforementioned polypeptides.

30 197. The method of Claim 196, wherein said chemokine-binding domain is an SLC-binding domain.

198. The method of Claim 196, wherein said chemokine-binding domain is a CXCL9-binding domain.

199. The method of Claim 190, wherein transport of SLC into the nucleus is measured by immunostaining.

200. A vector comprising a THAP responsive promoter operably linked to a nucleic acid encoding a detectable product.

5 201. The vector of Claim 200, wherein said THAP responsive promoter comprises a THAP responsive element.

202. The vector of Claim 200, wherein said THAP responsive promoter does not comprise a THAP responsive element.

10 203. A genetically engineered cell comprising the vector of any one of Claims 200-202.

204. An *in vitro* transcription reaction comprising a nucleic acid comprising a THAP responsive promoter, ribonucleotides and an RNA polymerase.

205. The *in vitro* transcription reaction of Claim 204, wherein said THAP responsive promoter comprises a THAP responsive element.

15 206. An isolated mutant THAP-family polypeptide that does not bind to a chemokine.

207. The isolated mutant THAP-family polypeptide of Claim 206, wherein said chemokine is selected from the group consisting of SLC, CCL19, CCL5, CXCL11, CXCL10 and CXCL9.

20 208. The isolated mutant THAP-family polypeptide of Claim 206, wherein said chemokine is SLC.

209. The isolated mutant THAP-family polypeptide of Claim 206, wherein said chemokine is CXCL9.

25 210. The isolated mutant THAP-family polypeptide of Claim 206, wherein said THAP-family polypeptide is THAP1.

211. The isolated mutant THAP-family polypeptide of Claim 210, wherein said polypeptide comprises an amino acid sequence of SEQ ID NO: 3.

212. The isolated mutant THAP-family polypeptide of Claim 211, wherein said amino acid sequence comprises at least one point mutation.

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